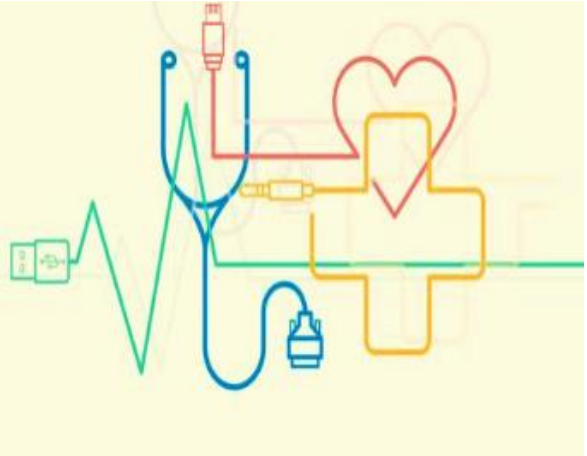
Using Peripherals in Telehealth Practice

Overview



Health care providers are integrating a variety of technologies into care delivery from off-the shelf webcams and laptops, tablets, and smart phones, to specialized field kits, mobile carts, and kiosks.[1] Some of these technologies come with or can be used in conjunction with peripherals to assist providers in treating and diagnosing patients remotely. Peripherals are devices separate from a laptop, tablet, or smartphone that collect and transmit high definition audio, video, images, and other health data (e.g., vitals, blood glucose levels, etc.) from the patient to a provider in a distant location.[2]

Peripherals support a range of provider types including therapists, pharmacists, cardiologists, and dermatologists, among others. They are often used in patients' homes to remotely monitor their biometric data after discharge from a hospital or nursing home.[3] Synchronizing peripherals to medical software applications allows providers to message and instruct patients directly.[4] Use of peripherals gives providers a better snapshot of their patients' health overtime outside of a clinical setting. This snapshot includes tracking patient health trends and treatment progress to determine if a clinical intervention is needed, thus helping keep patients healthy and reduce hospitalizations.[5, 6]

Peripheral Devices – Types and Uses

Peripheral devices have various clinical uses and can be purchased individually or as part of the following (please note, providers are encouraged to check with vendors for more information on cost, availability, and integration with their existing systems[7]):

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[1] National Consortium of Telehealth Resource Centers, *Telehealth 101 The Basics,* September 2017. Available at: www.telehealthresourcecenter.org/wp-content/uploads/2018/09/Telehealth-101.pdf.

[2] LiveClinic, *What are Medical Peripherals in Telemedicine?* August 2016. Available at: liveclinic.com/blog/medical-peripherals-telemedicine.

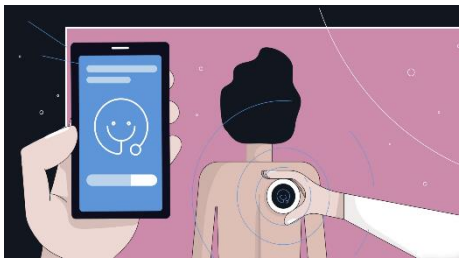
[3] Health Tech Magazines, *Technology and Telemedicine*. Available at: www.healthtechmagazines.com/technology-and-telemedicine/.

[4] National Telehealth technology Assessment Resources Center, *Home Telehealth – Overview.* Available at: telehealthtechnology.org/toolkit/home-telehealth-overview/.

[5] American Heart Association, Using Remote Patient Monitoring Technologies for Better Cardiovascular Disease Outcomes Guidance. Available at: www.heart.org/-/media/files/about-us/policy-research/policy-positions/clinical-care/remote-patient-monitoring-guidance2019.pdf?la=en&hash=A98793D5A043AB9940424B8FB91D2E8D5A5B6BEB.

[6] Healthcare Dive, *Remote Patient Monitoring Cuts Hospital Admissions, ER Visits, Report Finds,* October 2018. Available at: www.healthcaredive.com/news/remote-patient-monitoring-cuts-hospital-admissions-er-visits-report-finds/539073/.

[7] National Organization of State Offices of Rural Health, *Telehealth Technologies and Preparing to Select a Vendor*, September 2016. Available at: nosorh.org/wp-content/uploads/2016/11/NOSORH-Telehealth-Vendor-Fact-Sheet-FINAL.pdf.



- Telehealth toolkit: a durable and portable kit comprised of several peripheral devices (e.g., camera, thermometer, etc.) tailored based on usage and condition. Toolkits are used for specialized care, remote patient monitoring, and frontline care (e.g., chronic disease management, disease outbreak, etc.).
- Mobile cart: all-in-one system, typically used by larger health care organizations,[8] designed to include a computer and connected peripherals (e.g., mounted cameras, monitors, etc.) in a transportable frame to transmit a medical examination to a provider.

Best Practice Tips for Providers

Peripheral selection, set up, and maintenance

- Identify virtual care needs based on the patient population served and program goals (e.g., functionality, automatic data transmission, secure messaging, etc.)
- Ensure ease of use by the patient[9]
- Test peripherals for adequate resolution or audio quality prior to use in care delivery[10]
- Consider placement and secure storage when assessing space needs (in patient home or practice office) and mounting options
- Determine how customer support for troubleshooting technical issues will be handled (i.e., supported by a third-party vendor or practice staff)

Training

- Implement initial, ongoing, and refresher training for patients and providers
- Offer technology demonstrations for staff, patients, and caregivers[11]
- Ensure patient understanding of what to do when readings are abnormal and medical intervention may be needed[12]

[8] eVisit, *Telemedicine Telehealth Equipment*. Available at: evisit.com/resources/telemedicine-telehealth-equipment/.
[9] American Academy of Pediatrics, *Telemedicine: Pediatric Application*, 2015. Available at: pediatrics.aappublications.org/content/136/1/e293.full?sid=36a376a7-bb90-450e-b22a-edc783aa31a7.
[10] California Telehealth Resource Center, *The CTRC Telehealth Program Developer Kit*, 2014. Available at: www.telehealthresourcecenter.org/wp-content/uploads/2018/09/Complete-Program-Developer-Kit-2014.pdf.
[11] See n. 6, *Supra.*
[12] American Medical Association, *Digital Implementation Playbook*, 2018. Available at: www.ama-assn.org/system/files/2018-12/digital-health-implementation-playbook.pdf.

Patient eligibility and engagement

- Identify patient enrollment criteria based on medical condition (e.g., chronic conditions like hypertension, diabetes, COPD, etc.) and other factors (e.g., frequent utilization of the emergency room, hospital admission, etc.)[13]
- Establish an onboarding process to ensure patients can transmit their data (i.e., over an internet or cellular connection) and understand expectations (e.g., frequency, method of data collection, communication with care team, etc.)[14]
- Provide patient education materials that include the purpose for using peripherals and potential health benefits (e.g., achieving health goals)

Compliance and regulations

- Verify with your vendor if telehealth technology complies with relevant data privacy and security requirements, including HIPAA[15] rules and the DICOM[16] standard for medical images

Additional MHCC Resources

Telehealth Virtual Resource Center

mhcc.maryland.gov/mhcc/Pages/hit/hit_telemedicine/hit_telemedicine_virtual_resource.aspx

Understanding the Value of Remote Patient Monitoring

mhcc.maryland.gov/mhcc/pages/hit/hit/documents/HIT_Remote_Patient_Monitoring_Providers_Brief.pdf

Remote Patient Monitoring: Value for Patients and Applications During a Public Health Emergency

mhcc.maryland.gov/mhcc/pages/hit/hit/documents/HIT_RPM_for_Providers_Brief.pdf

Questions?

Contact Eva Lenoir, MHCC Program Manager at:

Eva.lenoir@marland.gov

[13] Health Information Technology, Evaluation, and Quality Center, *Federally Qualified Health Center's Remote Patient Monitoring Tool Kit*. Available at: telehealthdirectory.org/wp-content/uploads/2017/08/FQHC-RPM-ToolKit.pdf.
[14] Healthcare IT News, *Implementation best practices: Teeing up telemedicine,* October 2019. Available at: www.healthcareitnews.com/news/implementation-best-practices-teeing-telemedicine.
[15] HIPAA stands for the Health Insurance Portability and Accountability Act of 1996 and governs the privacy and security of health information. More information available at: www.hhs.gov/hipaa/for-professionals/index.html.
[16] DICOM stands for Digital Imaging and Communications in Medicine. More information available at: www.dicomstandard.org/.